A MORPHOMETRIC STUDY OF HUMAN ADULT TRACHEA & LEFT MAIN STEM BRONCHUS AND ITS CLINICAL IMPLICATION.

ABSTRACT

A morphometric study of human adult trachea and left main bronchus was undertaken in the Institute of Anatomy, Madras Medical College, Chennai - 3, on 40 embalmed cadavers of which 21 were male and 19 were female which are voluntarily donated to the Institute for study purpose. The tracheal length, left main bronchial length was measured using vernier calipers. The transverse diameter (Width), anteroposterior diameter (Depth) of both the trachea and left main bronchi were measured and the width/depth ratio was calculated. The subcarinal and left main bronchus angle was measured. The tracheal rings were counted serially.For each component of the measurements, the minimum, maximum, mean, standard deviation (SD) and test of significance were calculated using student ‘t’ test.The present study revealed the various dimensions, namely the length, transverse and anteroposterior diameter, width/depth ratio and angles were different in both sexes. Standard measurements of these parameters of tracheobronchial tree are essential for various people like Thoracic surgeons who deal with resection and reconstruction of the tracheobronchial tree, Pulmonologists to understand the etiology of several airway diseases and bronchoscopic procedures (diagnostic, therapeutic and combined),Radiologists for interpretation of images, Oto-rhino laryngologists who perform elective or emergency tracheostomy and also the Anesthetists who do maneuvers like endotracheal intubation (single or double lumen) with skill and perfection.

Key words:Morphometry, Human adult Trachea, Left main stem bronchus, cadaveric study